



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/566,211

03/08/2006

Makoto Asai

F05415US

1010

21254

7590

04/07/2008

MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817

EXAMINER

FORD, KENISHA V

ART UNIT

PAPER NUMBER

2812

MAIL DATE

DELIVERY MODE

04/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,211	Applicant(s) ASAI ET AL.	
	Examiner KENISHA V. FORD	Art Unit 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 and 14-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6, 7 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :1/27/06, 8/2/06, 12/19/06, 11/20/07.

DETAILED ACTION

This Office Action is regarding the Response filed on 30 November 2007. Currently, claims 6-13 and 20 are pending. Claims 1-5 and 14-19 have been withdrawn from consideration.

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 6-13 and 20 in the reply filed on 11/30/07 is acknowledged.
2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

3. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 4/7/04 & 7/28/04. It is noted, however, that applicant has not filed a certified copy of the applications as required by 35 U.S.C. 119(b).

Information Disclosure Statement

4. The information disclosure statement (IDS) submitted on 1/27/06, 8/2/06, 12/19/06 & 11/20/07 are being considered by the examiner.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 6, 7 and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Suehiro et al. (US 2003/0122478 A1).

7. Regarding claim 6, Suehiro et al. discloses a light-emitting diode of a surface emitting type in which a semiconductor layer is deposited on a crystal growth plane of a crystal growth substrate, wherein said crystal growth substrate comprises at least one of an output plane and a reflection plane which contributes to luminous output of the device through a physical shaping process such as polishing treatment, dicing treatment and blasting treatment, and a physically damaged layer which is formed on the surface of at least one of said output plane and said reflection plane and remains owing to friction and shock generated in said shaping process is removed (p. 9, para. 131-132, line 10).

Regarding claim 7, Suehiro et al. discloses a light-emitting diode wherein a metal layer which has light-transparency to transmit light to the luminous extracting side of said device is formed on said output plane (p. 9, para. 132, lines 10-16).

Regarding claims 8 and 20, Suehiro et al. discloses a light-emitting diode, wherein a metal layer which reflects light to the luminous extracting side of said device is formed on said reflection plane (p. 9, para. 132, lines 16-21).

Regarding claim **9**, Suehiro et al. discloses a light-emitting diode wherein said crystal growth substrate is formed by using $\text{Al}_x\text{Ga}_{1-x}\text{N}$ ($0 \leq x \leq 1$) or silicon carbide (SiC) (p. 9, para. 142, lines 1-4).

Regarding claim **10**, Suehiro et al. discloses a light-emitting diode wherein a taper plane which inclines to said crystal growth plane of said crystal growth substrate is formed at least as a portion of at least one of output plane or at least as a portion of said reflection plane (p. 9, para. 131, lines 11-14).

Regarding claim **11**, Suehiro et al. discloses a light-emitting diode in which a semiconductor layer is deposited on a crystal growth plane of a crystal growth substrate, comprising: a taper plane which inclines to said crystal growth plane of said crystal growth substrate which is formed at least at a portion of the sidewall of said light-emitting diode, wherein said taper plane is exposed to the surface side of said light-emitting diode at which a semiconductor crystal layer and a positive electrode are formed, and a physically damaged layer which is formed on the surface of said taper plane and remains owing to friction and shock generated in said taper part is removed (p. 9, para. 131-132, line 10).

Regarding claim **12**, Suehiro et al. discloses a light-emitting diode which is fabricated by dividing a semiconductor wafer comprising plural light-emitting diodes into each of said light-emitting diode, comprising: a taper plane at least at a portion of the sidewall of said light-emitting diode, wherein said taper plane is a portion of the plane of an approximately V-shaped dividing groove which divides the semiconductor wafer into each of said light-emitting diode (p. 11, para. 158, lines 1-14).

Allowable Subject Matter

8. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of reference does not teach that the peak luminous wavelength of the light-emitting diode is less than 470 nm.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KENISHA V. FORD whose telephone number is (571)270-3328. The examiner can normally be reached on Monday-Thursday 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lebentritt can be reached on (571) 272-1873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/566,211

Page 6

Art Unit: 2812

KVF

/Michael S. Lebentritt/
Supervisory Patent Examiner, Art Unit 2812